



## State of Utah

# Department of Natural Resources

MICHAEL R. STYLER Executive Director

# Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR. Governor

GARY R. HERBERT Lieutenant Governor

May 2, 2006

Wess Sorensen, Mine Manager Canyon Fuel Company, LLC HC 35 Box 380 Helper, Utah 84526

Subject: Results of the 2004 Midterm Review, Canyon Fuel Company, LLC, Skyline Mine, C/007/0005, Task ID #2447, Outgoing File

Dear Mr. Sorensen:

The Division has completed the Midterm review for the Skyline Mine as required by R645-303-211. The following items chosen for review were identified to you in a letter dated November 18, 2004.

- 1. An AVS check to ensure that Ownership and Control information is current and correct.
- 2. A review to ensure that the Plan has been updated to reflect changes in the Utah Coal Regulatory Program, which have occurred subsequent to permit approval (One area of emphasis is to ensure compliance with the U. S. Fish and Wildlife Windy Gap Process).
- 3. A review of the plan to ensure that the requirements of all permit conditions, division orders, notice of violation abatement plans, and permittee initiated plan changes are appropriately incorporated into the plan document.
- 4. A review of the applicable portions of the permit to ensure that the plan contains commitments for application of the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area.
- 5. A review of the bond to ensure that it is in order and that the cost estimate is accurate and is escalated to the appropriate year dollars.
- 6. A review of the MRP commitments for the subsidence control/monitoring plans and reporting requirements.
- 7. A technical site visit in conjunction with the assigned compliance inspector to document the status and effectiveness of operational, reclamation, and contemporaneous reclamation practices.

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The midterm review has been completed, and all sections of the review have been fulfilled. A complete copy of the MRP should be maintained at the minesite. Enclosed is a copy of the Midterm Technical Analysis. Also enclosed is a stamped incorporated copy for your copy of the Mining and Reclamation Plan. This concludes the Midterm Review for the Skyline Mine. Thank you for your help during this process.

Sincerely,

D. Wayne Hedberg Permit Supervisor

an enclosure

cc: Ranvir Singh, OSM

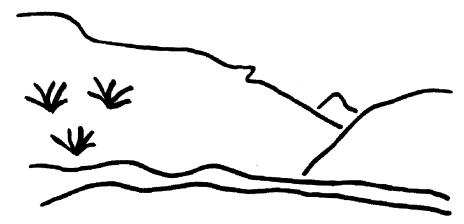
Jim Kohler, BLM Alice Carlton, USFS

Mark Stillson, Water Rights w/o

Dave Ariotti, DEQ w/o Derris Jones, DWR w/o Price Field Office

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# State of Utah



Utah Oil Gas and Mining

**Coal Regulatory Program** 

Skyline Mine Canyon Fuel Company, LLC Midterm Technical Analysis May 2, 2006

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#### TECHNICAL ANALYSIS DESCRIPTION

# TECHNICAL ANALYSIS DESCRPTION

The Division ensures that coal mining and reclamation operations in the State of Utah are consistent with the Coal Mining Reclamation Act of 1979 (Utah Code Annotated 40-10) and the Surface Mining Control and Reclamation Act of 1977 (Public Law 95-87). The Utah R645 Coal Mining Rules are the procedures to implement the Act. The Division reviews each permit or application for permit change, renewal, transfer, assignment, or sale of permit right for conformance to the R645-Coal Mining Rules. The Applicant/Permittee must comply with all the regulatory requirements as established by the R645 Coal Mining Rules.

The regulatory requirements for obtaining a Utah Coal Mining Permit are included in the section headings of the Technical Analysis (TA) for reference. A complete and current copy of the coal rules can be found at <a href="http://ogm.utah.gov">http://ogm.utah.gov</a>

The Division writes a TA as part of the review process. The TA is organized into section headings following the organization of the R645-Coal Mining Rules. The Division analyzes each section and writes findings to indicate whether or not the application is in compliance with the requirements of that section of the R645-Coal Mining Rules.

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# TECHNICAL ANALYSIS DESCRIPTION

#### **GENERAL CONTENTS**

# **GENERAL CONTENTS**

# **IDENTIFICATION OF INTERESTS**

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

#### **Analysis:**

Arch Coal Corporation obtained full ownership of Canyon Fuel Company in the fall of 2004. While making the required changes in the ownership and control information, they decided to have a "General Chapter 1." This Chapter 1 contains all of the required ownership and control information, and is valid for all Canyon Fuel Company mines. This will simplify the process of keeping the ownership and control information updated for each of the mines. The Division notified the Permittee of final approval of the "General Chapter 1" on February 11, 2005.

#### **Findings:**

Identification of Interests Information meets the requirements of the regulations.

#### VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

#### **Analysis:**

The Soldier Canyon Mine does not have any outstanding Notices of Violation (NOV). The AVS system does not show any of the following for Canyon Fuel Company:

- State or Federal Permit suspension or revocation,
- Bond or other security forfeiture in the last five years,
- Any unresolved State or Federal violations received within the last three years, or
- Any outstanding, unresolved violations.

# **Findings:**

The Permittee has complied with the Violation Information section of the regulations.

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**GENERAL CONTENTS** 

# **OPERATION PLAN**

# SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

#### **Analysis:**

The Permittee met the requirements for the subsidence control plan. The Permittee clarified all subsidence issues brought up in the midterm review during the North Lease mine plan modifications.

## **Findings:**

The Permittee met the subsidence control plan requirements.

#### FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

#### **Analysis:**

#### Wetlands and Habitats of Unusually High Value for Fish and Wildlife

The USFWS has determined that water depletions from the Upper Colorado River System are a major source of impact to four endangered fish species (Colorado pikeminnow [squawfish], humpback chub, bonytail chub, and razorback sucker). The USFWS Recovery Implementation Program is the reasonable and prudent alternative to avoid the likelihood of jeopardy to these fish. The Permittee estimated that mining operations total water balance at an annual net gain of 5,966 acre-feet (Vol.1A, Sec. 2.5, p. 2-51e). The Division, in consultation with the USFWS, considered that mining operations were "not likely to adversely affect" the endangered fishes of the Colorado River Basin because there was no indication of depleting water from the Basin.

The Permittee must update all equations and justifications with supporting documentation leading to the overall sum of water depletions or additions when projects would significantly

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#### **OPERATION PLAN**

change the current estimated value. If values increase over 100 acre-feet of water, the Permittee will mitigate their impact by contributing a one-time fee to the Recovery Program.

#### Findings:

Information provided in the plan meets the Operations - Fish and Wildlife Information requirements of the regulations.

#### HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

## **Analysis:**

The plan contains commitments to use the best technology currently available (BTCA) to prevent additional contributions of suspended solids to stream flows outside of the permit area. BTCA means that the operator is employing the best methods available at any one time. The Skyline Mine MRP contains the following commitments to BTCA in controlling sediment.

# Water-Quality Standards And Effluent Limitations

The mine has a current Utah Pollutant Discharge Elimination System (UPDES) Permit, which it is abiding by. The Utah Division of Water Quality (DWQ) issued the current permit on Nov. 23, 2004. It expires Nov. 30, 2009.

There are three point sources covered under the UPDES Permit: UT0023540-001 (mine site pond and mine discharge to Eccles Creek), UT0023540-002 (loadout pond-Eccles Creek), and UT0023540-003 (waste rock disposal site pond – UP Canyon Creek).

Skyline complied with the permit conditions during the review period, until water inflows increased, forcing them to increase mine-water discharge. Though the discharge water complied with the 1310 mg/l daily maximum limit for total dissolved solids (TDS), the amount of water being discharged caused them to exceed the 7.1 tons per day maximum for TDS.

Canyon Fuel worked closely with DWQ to remedy the situation, and after much study and effort, DWQ modified the Skyline Mine UPDES permit in May of 2003 to remove the 7.1 ton per day limit for TDS, unless the 30-day average were to exceed 500 mg/l.

The current permit allows for a daily maximum of total dissolved solids discharged (TDS) of 1310 mg/l and a 30-day average of 500 mg/l. There is no tons per day (tpd) daily maximum, unless the 30-day average exceeds 500 mg/l; then a 7.1-tpd limit is imposed. The permit also states:

Upon determination by the Executive Secretary that the permittee is not able to meet the 500 mg/L 30-day average or the 7.1 tons per day loading limit, the permittee is required to participate in and/or fund a salinity offset project to include TDS offset credits, within six (6) months of the effective date of this permit.

In September of 2004, Skyline's mine discharge began averaging 850-950 mg/l TDS, and due to volume of water pumped (approx 3500 gpm) they routinely exceed the tons per day limit. Because the conditions at the mine will require such pumping for quite some time, Canyon Fuel Company prepared a salinity offset plan and submitted it as required to DWQ. The Division of Water Quality approved the plan on January 5, 2005, but is retroactive to September 2004.

Canyon Fuel Company has met the requirements of the UCMR by keeping point-source discharges within the UPDES limits where possible, and working with the DWQ to craft appropriate remedies when needed.

#### **Sediment Control Measures**

The Permittee uses a series of culverts and ditches to divert all runoff from the undisturbed area away from the disturbed area to prevent excess sediment contribution from the disturbed area. The sedimentation pond treats all runoff from the disturbed area, except in thirty-eight small areas where the Permittee uses alternative sediment controls, or vegetation has grown sufficiently to stabilize the area.

#### **Siltation Structures: Sedimentation Ponds**

As stated previously, there are three sedimentation ponds at the Skyline Mine, which treat runoff from the disturbed area; one each at the mine site, coal loadout, and waste-rock disposal site. Skyline designed each to detain the runoff from a 10-yr. 24-hr. design storm for 24 hours. The mine site pond has additional capacity to treat mine water discharge. A Professional Engineer has certified the design and construction of each pond, and Canyon Fuel conducts inspections as required under the UCMR.

The mine-site pond is located near the crushing and truck loading station. This pond has a 1-foot freeboard. The cleanout level for the pond is at least 2 feet below the decant level, as required by the Division of Water Quality.

The loadout pond is located near the coal storage silos. This pond has a 2-foot freeboard.

The waste-rock disposal-site pond is located at the west end of the site.

Siltation Structures: Alternative Sediment Control Areas (ASCAs)

To control sediment in areas that do not report to the sedimentation pond, the Permittee currently has thirty-eight approved Alternative Sediment Control Areas (ASCAs) and Exempt Areas. They account for a total of close to 22 acres of drainage area as discussed below.

Area #1 - Water Tank Area (Exempt)

Canyon Fuel Company depicts this area on Map No. 4.4.2-1F. The area includes 0.19 acres. The Permittee has re-seeded this area and it now has enough vegetation to prevent excess sediment contribution. The Permittee has proven this through computer modeling (SEDCAD).

*Area #2 – South Fork of Eccles Creek (ASCA)* 

The Permittee depicts this area on Map No. 3.2.1-1. This area includes 0.23 acres. Sediment control measures in this area include:

- Vegetation,
- Straw bales, and/or
- Silt fences.

Area #3 – Middle Fork of Eccles Creek (ASCA)

The Permittee depicts this area on Map No. 3.2.1-1. This area includes 0.29 acres. Sediment control measures in this area include:

- Vegetation,
- Straw bales, and/or
- Silt fences.

*Area # 4 – North Fork of Eccles Creek (ASCA)* 

The Permittee depicts this area on Map No. 3.2.1-1. This area includes 1.0 acres. Sediment control measures in this area include:

- Vegetation,
- Straw bales, and/or
- Silt fences.

Area #5 – Highway Approach to Main Mine Office (Exempt)

The Permittee depicts this area on Map No. 3.2.1-1. This area includes 0.18 acres. This Exempt Area lies within the permit area, and the Permittee plans to reclaim it. However, since it is currently paved, and inside the UDOT right-of-way, no other sediment control measures are required.

Area #6 – Highway Approach to Mine No. 3 Portal (Exempt)

The Permittee depicts this area on Map No. 3.2.1-1. This area includes 0.07 acres. This Exempt Area lies within the permit area, and the Permittee plans to reclaim it. However, since it is currently paved and inside the UDOT right-of-way, no other sediment control measures are required.

Area #7 - Area Above Conveyor Bench (ASCA)

The Permittee depicts this area on Map No. 3.2.1-1. This area includes 0.58 acres. Sediment control measures in this area include:

- Vegetation,
- Straw bales
- Matting, and
- Silt fences.

Areas #8, 9, 10, & 10a - Conveyor Bench Down Eccles Canyon (ASCAs)

The Permittee depicts these areas on Maps No. 3.2.3-3 through 3.2.3-3f. These areas include 1.82, 0.72, 6.04, and 0.45 acres, respectively. Sediment control measures in this area include:

- Vegetation,
- Straw bales
- Matting,
- Grass filters
- Berms, and
- Silt fences.

Area #11 –Upper Well House (ASCA)

The Permittee depicts this area on Map No. 3.2.3-3a. This area includes 0.02 acres. Sediment control measures in this area include:

- Straw bales, and/or
- Silt fences.

Area #12 -Lower Well House (ASCA)

The Permittee depicts this area on Map No. 3.2.3-3b. This area includes 0.01 acres. Sediment control measures in this area include:

- Straw bales, and/or
- Silt fences.

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Area #12a -Road to Well House (ASCA)
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This area includes 0.03 acres and the fill slope is protected by large rocks.

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Area #13 -Railroad Loadout Well House (ASCA)
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The Permittee depicts this area on Map No. 3.2.3-3f. This area includes 0.01 acres. Straw bales are the primary sediment control in this area.

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Area #14 – Highway Approach to the Truck Dump Area @ Rail Loadout (Exempt)
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The Permittee depicts this area on Map No. 3.2.1-3. This area includes 0.31 acres. This Exempt Area lies within the permit area, and the Permittee plans to reclaim it. However, since it is currently paved, and inside the UDOT right-of-way, no other sediment control measures are required.

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Area #15 – North of Truck Dump (ASCA)
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The Permittee depicts this area on Map No. 3.2.1-3. This area includes 3.3 acres. Sediment control measures in this area include:

- Vegetation,
- Matting,
- Straw bales, and/or
- Silt fences.

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Area #16 - South of Truck Dump (ASCA)
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The Permittee depicts this area on Map No. 3.2.1-3. This area includes 0.61 acres. Sediment control measures in this area include:

- Vegetation,
- Matting,
- Straw bales, and/or
- Silt fences.

Area #17 – South of Rail Loadout Sediment Pond (ASCA)

The Permittee depicts this area on Map No. 3.2.1-3. This area includes 0.35 acres. Sediment control measures in this area include:

- Paving,
- Straw bales, and/or
- Silt fences.

Area #17a - Adjacent to Rail Loadout Sediment Pond (Exempt)

The Permittee depicts this area on Map No. 3.2.1-3. This area includes 0.15 acres, and is exempt since it is the outslope of the sediment pond embankment.

Area #18 -Adjacent to Rail Loadout Structure (Exempt)

The Permittee depicts this area on Map No. 3.2.1-3. This area includes 0.1 acres, and is exempt because it is paved.

Area #19 – Adjacent to Rail Loadout Structure (ASCA)

The Permittee depicts this area on Map No. 3.2.1-3. This area includes 0.1 acres. Sediment control measures in this area include:

- Rock fill,
- Straw bales, and/or
- Silt fences.

Areas #20, 21, and 22 – Highway Approaches to the Rail Loadout (Exempt)

The Permittee depicts these areas on Map No. 3.2.1-3. These areas include 0.1 acres each. These Exempt Areas lie within the permit area, and the Permittee plans to reclaim them. However, since they are currently paved, and inside the UDOT right-of-way, no other sediment control measures are required.

Area #23 -South Fork Breakout Area (Exempt)

The Permittee depicts this area on Map No. 3.2.11-1. This area includes 0.96 acres, and is exempt because the small pad area drains back into the mine, then is pumped to the surface and treated by the sedimentation pond.

Area #24 – Access Road to Waste Rock Disposal Site (Primary Road)

The Permittee depicts this area on Map No. 3.2.8-1. This area includes 3.45 acres, and is a primary road. Because it is a primary road, the Permittee has designed it with appropriate

drainage structures to minimize erosion and to safely pass the peak runoff from a 10-yr, 6-hr precipitation event.

Area #24a -Access Road to Waste Rock Disposal Site (Exempt)

The Permittee depicts this area on Map No. 3.2.8-1. This area includes 0.1 acres. The Permittee has re-seeded this area and it now has enough vegetation to prevent excess sediment contribution. The Permittee has proven this through computer modeling (SEDCAD).

Area #25 -Overland Conveyor Bents 155 to 154a (Exempt)

The Permittee depicts this area on Map No. 3.2.3-3a. This area includes less than 0.001 acres, and is permitted, but not disturbed. The overland conveyor does span across the area, but has no impact on erosion.

Area #26 -Overland Conveyor Bents 147 to 145 (Exempt)

The Permittee depicts this area on Map No. 3.2.3-3a. This area includes less than 0.001 acres. The disturbance in the area is limited to six 24-inch diameter bent leg concrete supports. To install the supports, the Permittee removed the topsoil and subsoil and then filled the holes with concrete. There is no exposed disturbance, therefore no possibility for excess sediment contributions.

Area #27 –Overland Conveyor Bents 137 to 135 (Exempt)

The Permittee depicts this area on Map No. 3.2.3-3b. This area includes less than 0.001 acres. The disturbance in the area is limited to three 24-inch diameter bent leg concrete supports. To install the supports, the Permittee removed the topsoil and subsoil and then filled the holes with concrete. There is no exposed disturbance, therefore no possibility for excess sediment contribution exists.

Area #28 –Overland Conveyor Bent 97 to 94 (Exempt)

The Permittee depicts this area on Map No. 3.2.3-3c. This area includes approximately 0.001 acres. The disturbance in the area is limited to five 18 to 48-inch diameter bent leg concrete supports. To install the supports, the Permittee removed the topsoil and subsoil and then filled the holes with concrete. There is no exposed disturbance, therefore no possibility for excess sediment contributions.

Area #29 -Overland Conveyor Bent 90 to 83 (Exempt)

The Permittee depicts this area on Map No. 3.2.3-3c, and 3.2.3-3d. This area includes approximately 0.001 acres. The disturbance in the area is limited to ten 18 to 36-inch diameter bent leg concrete supports. To install the supports, the Permittee removed the topsoil and subsoil and then filled the holes with concrete. There is no exposed disturbance, therefore no possibility for excess sediment contributions.

Area #30 –Overland Conveyor Bent 68 to GB-6 (Exempt)

The Permittee depicts this area on Map No. 3.2.3-3d, 3.2.3-3e, and 3.2.3-3f. This area includes approximately 0.34 acres. The disturbance in the area includes one-hundred-fifty supports ranging from 12-inches in diameter, to 24" X 60". To install the supports, the Permittee removed the topsoil and subsoil and then filled the holes with concrete. There is no exposed disturbance, therefore no possibility for excess sediment contributions.

Area #30a -Overland Conveyor Bent 68 to GB-6 (ASCA)

The Permittee depicts this area on Map No. 3.2.3-3d, 3.2.3-3e, and 3.2.3-3f. This area includes approximately 0.06 acres. The disturbance is limited to a small coal spill area between GB-6 and Truss 3. Sediment control measures in this area include:

- Straw bales, and/or
- Silt fences.

Area #31 -Topsoil Storage Area; South Fork Portals (Exempt)

The Permittee depicts this area on Map No. 3.2.11-1. The Permittee has re-seeded this area and it now has enough vegetation to prevent excess sediment contribution. The Permittee has proven this through computer modeling (SEDCAD).

Area #32 -Topsoil Storage Area; South Fork Portals (Exempt)

The Permittee depicts this area on Map No. 3.2.11-1. The Permittee has re-seeded this area and it now has enough vegetation to prevent excess sediment contribution. The Permittee has proven this through computer modeling (SEDCAD).

Area #33 -Snow Storage Area; Near Overland Conveyor Docking Station (Exempt)

The Permittee depicts this area on Map No. 3.2.3-3. This area contains 0.64 acres. The Permittee uses a portion of this for snow storage, UDOT uses the remainder for the same purpose. The post-mining land use is snow storage, as well. Sediment control measures in this area include:

- Straw bales, and/or
- Silt fences.

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#### **OPERATION PLAN**

Some of the discussed ASCA areas may have enough vegetative cover at this point to serve as a barrier to sediment loss. Skyline has the option of demonstrating that, and having the areas declared "exempt;" if they have not done so, all alternative sediment control measures should be in place at all times.

The thirty-eight ASCAs and Exempt Areas, as discussed above represent the Best Technology Currently Available (BTCA) in controlling sediment in areas that do not report to the sedimentation ponds.

# Findings:

The thirty-eight ASCAs and Exempt Areas, as discussed above represent the Best Technology Currently Available (BTCA) in controlling sediment in areas that do not report to the sedimentation ponds. The sedimentation ponds represent BTCA for controlling sediment in the rest of the disturbed area.

## **RECLAMATION PLAN**

# **RECLAMATION PLAN**

# **BACKFILLING AND GRADING**

Regulatory Reference: 30 CFR Sec. 785.15, 817.102, 817.107; R645-301-234, -301-537, -301-552, -301-553, -302-230, -302-231, -302-232, -302-233.

#### **Analysis:**

#### General

The Permittee addressed the issues relating to disposal of asphalt by committing to dispose of all asphalt off site.

# **Findings:**

The Permittee met the backfilling and grading requirements.

# **MINE OPENINGS**

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

# **Analysis:**

The Permittee met the requirements for the reclamation of mine openings. The Permittee address the shaft closure issues raised in the midterm by committing to backfill all shafts.

# **Findings:**

The Permittee met the requirements for reclamation of mine openings.

# **BONDING AND INSURANCE REQUIREMENTS**

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

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# **RECLAMATION PLAN**

# **Analysis:**

The Permittee met the requirements for providing the Division with the information needed to determine the reclamation cost in the event of bond forfeiture. The revised reclamation cost estimates is included in the MRP.

# Findings:

The Permittee met the requirements for bonding.

 $O: \label{eq:conditional} O: \label{eq:con$